

REMARKS

1. Summary of Office Action

In the Office Action mailed July 3, 2008, the Examiner rejected claims 1-27 under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent Application Publication No. 2002/0188875 (Hwang).

2. Amendments to Claims

Applicants have amended claims 1, 10, and 19 to further clarify the claimed subject matter.

3. Summary of Claimed Invention

Presently pending are claims 1-27, of which claims 1, 10, and 19 are independent, and the remainder are dependent.

Various embodiments of Applicants' invention are directed to a high-speed network interface that includes automatic power management with auto-negotiation for adjusting the speed of the interface's communication link with an external network in accordance with conditions in the host system in which the network interface operates. Specifically, power management logic of the network interface may monitor for conditions of the host system that necessitate transitions between at least a high speed protocol and a lower speed protocol of the network interface's communication link with the external network. Conditions that may cause the power management logic to invoke a change in protocol speed include, for instance, a transition between power states of the host system, and/or a signal generated by software executing on the host processor of the system and reflective of the power state of the system. For example, detection by the network interface of a loss in primary system power may cause the

power management logic to force the network interface to transition from the high speed to the lower speed protocol. Other examples are also possible.

While operating in the lower speed protocol mode, the network interface is capable of monitoring the network for wake-up signals that are directed to the host computer system. For example, if the network interface is operating in the lower speed protocol owing to the host system operating in a lower power mode, the wake-up signal may be used to cause the system to transition to its full power mode. Other examples are also possible.

One aspect of Applicants' system is that the transition of the network interface from its high speed protocol to its lower speed protocol is invoked by a state machine incorporated into its internal power management logic in response to detection that the system has entered its lower power mode. That is, the state machine of the network interface is capable of detecting an environmental change, such as a drop in supplied power, and responsively forcing the protocol speed transition.

It should be understood that the preceding brief summary is intended to call attention to only certain aspects of Applicants' invention that are relevant to the following discussion. Consequently, the summary should not be viewed as encompassing all aspects previously disclosed and/or claimed, nor limiting the scope of Applicants' presently claimed invention in any new manner.

4. Response to Rejections under 35 U.S.C. §102(e)

As noted, the Examiner rejected claims 1-27 under 35 U.S.C. § 102(e) as being unpatentable over Hwang. In order to anticipate a claimed invention, the prior art must teach or suggest all of the claim limitations. Applicants respectfully submit that the Hwang reference fails to teach all of the limitations of any the above-listed claims.

With respect to independent claims 1 and 19, the limitation of utilizing a state machine to cause the network interface to renegotiate from a high speed to lower speed mode in response to the entry of the host processor or system bus into a lower power mode and for entering a power down state in the event that the lower speed protocol is not successfully negotiated is not taught by Hwang.

With respect to independent claim 10, it has also been amended to include suppressing a link-change signal at a wake-up detector. This amendment is supported by the specification at least as described in paragraph 31. Applicants have reviewed Hwang, and did not identify the aspect of suppressing a link-change signal as described in pending claim 10.

Applicants submit that claims 1, 10 , and 19 are allowable for at least the reasons stated above. Applicants further submit that for at least the reason that they depend from an allowable claim, claims 2-9, 11-18 and 20-27 are allowable as well.

5. Conclusion

The Applicants submit that the application is in good and proper form for allowance and therefore respectfully request favorable reconsideration. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney, at 312-913-3305.

Respectfully submitted,

**McDONNELL BOEHNEN
HULBERT & BERGHOFF LLP**

Date: January 5, 2009

By: /Robert J. Irvine III/
Robert J. Irvine III
Reg. No. 41,865